

# HITACHI

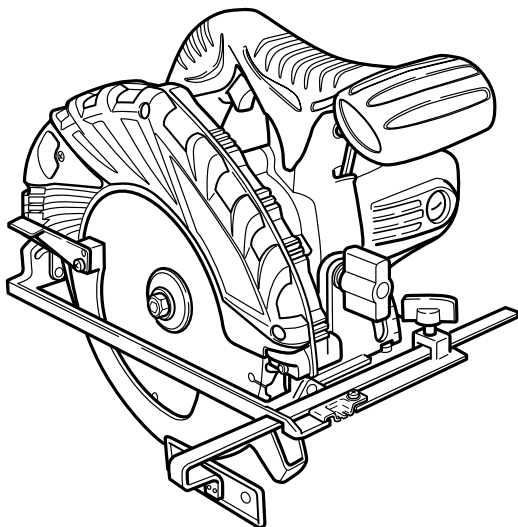
## Circular Saw

日立牌手提電動圓鋸

### C 9SA2 • C 9BA2

HANDLING INSTRUCTIONS

使用說明書



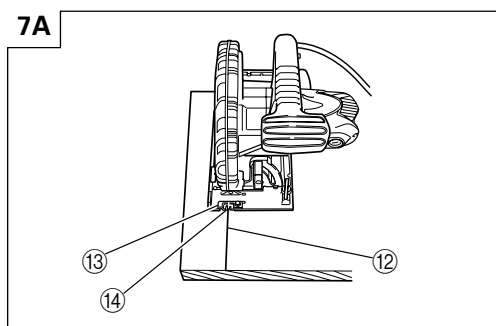
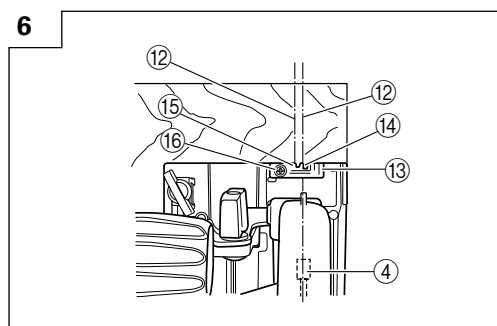
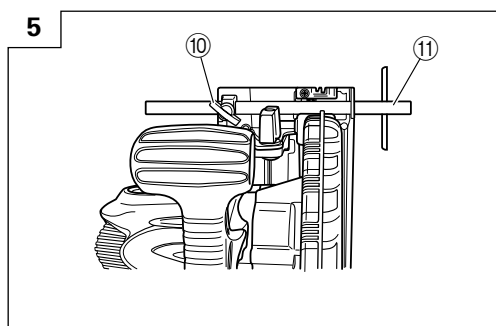
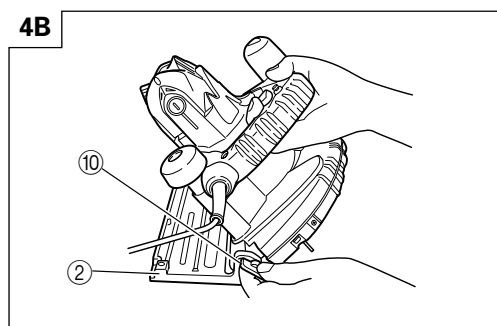
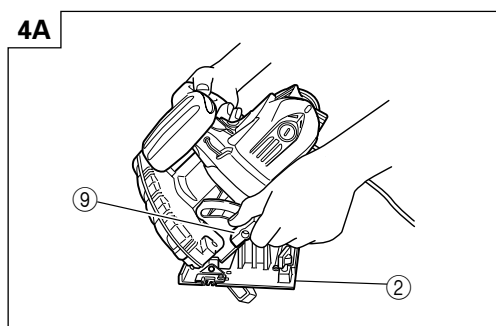
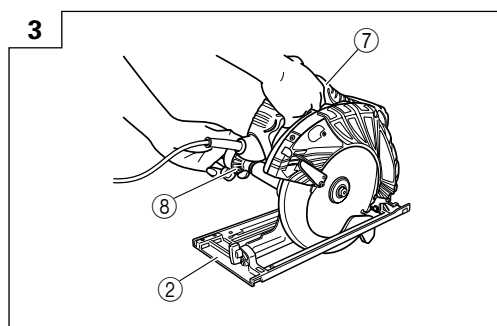
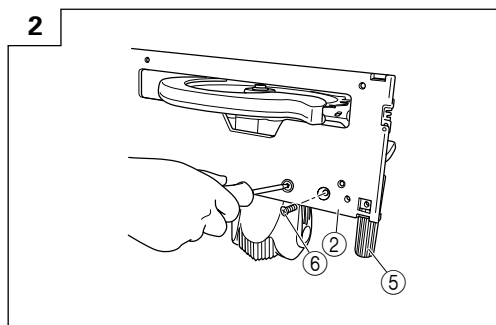
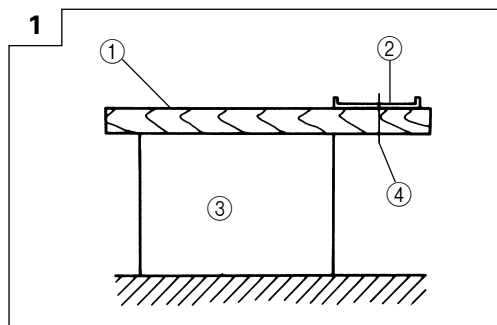
C9SA2



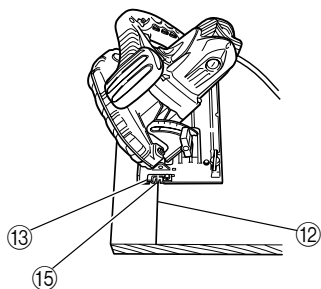
Read through carefully and understand these instructions before use.

使用前務請詳加閱讀

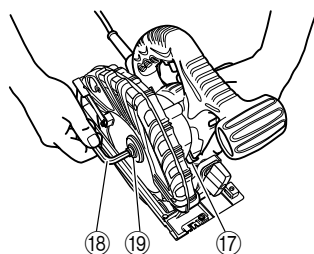
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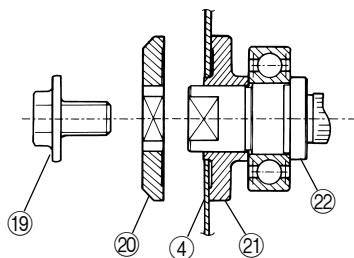
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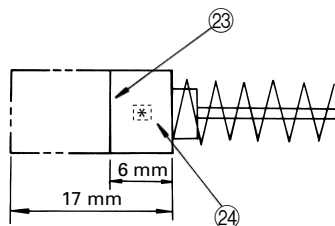
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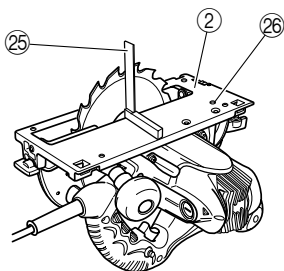


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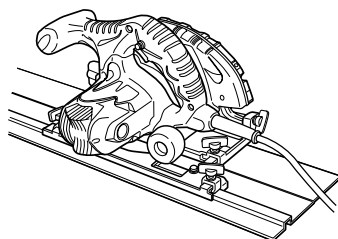


	C9SA2	C9BA2
24	38	65

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①	Lumber	鋸木
②	Base	底座
③	Workbench	工作臺
④	Saw blade	鋸片
⑤	Side Handle	側邊把手
⑥	Flat hd. screw M6 × 16	平頭螺絲 M6 × 16
⑦	Handle	把手
⑧	Knob	旋鈕
⑨	Wing-nut	蝶形螺帽
⑩	Wing-bolt	蝶形螺栓
⑪	Guide	引導器
⑫	Premarked line	記號線
⑬	Guide piece	導向器
⑭	Front scale when not inclined	不傾斜時的前刻度盤
⑮	Front scale at 45° incline	傾斜 45 度時的前刻度盤
⑯	M4 Screw	M4 螺絲
⑰	Lock lever	鎖緊桿
⑱	Hex. bar wrench	六角頭棒形扳手
⑲	Hexagonal-socket bolt	六角承座螺栓
⑳	Washer (B)	襯墊 (B)
㉑	Washer (A)	襯墊 (A)
㉒	Spindle	心軸
㉓	Wear limit	磨損極限
㉔	No. of carbon brush	碳刷號
㉕	Square	直角尺
㉖	Slotted set screw	槽頭螺絲

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## GENERAL SAFETY RULES

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### WARNING!

#### Read all instructions

Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

The term "power tool" in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool.

### SAVE THESE INSTRUCTIONS

#### 1) Work area

- a) **Keep work area clean and well lit.**  
*Cluttered and dark areas invite accidents.*
- b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.**  
*Power tools create sparks which may ignite the dust of fumes.*
- c) **Keep children and bystanders away while operating a power tool.**  
*Distractions can cause you to lose control.*

#### 2) Electrical safety

- a) **Power tool plugs must match the outlet.**  
**Never modify the plug in any way.**  
**Do not use any adapter plugs with earthed (grounded) power tools.**  
*Unmodified plugs and matching outlets will reduce risk of electric shock.*
- b) **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.**  
*There is an increased risk of electric shock if your body is earthed or grounded.*
- c) **Do not expose power tools to rain or wet conditions.**  
*Water entering a power tool will increase the risk of electric shock.*
- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.**  
*Damaged or entangled cords increase the risk of electric shock.*
- e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.**  
*Use of a cord suitable for outdoor use reduces the risk of electric shock*

#### 3) Personal safety

- a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.**  
*A moment of inattention while operating power tools may result in serious personal injury.*
- b) **Use safety equipment. Always wear eye protection.**  
*Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.*
- c) **Avoid accidental starting. Ensure the switch is in the off position before plugging in.**  
*Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.*
- d) **Remove any adjusting key or wrench before turning the power tool on.**

*A wrench or a key left attached to a rotating part of the power tool may result in personal injury.*

- e) **Do not overreach. Keep proper footing and balance at all times.**

*This enables better control of the power tool in unexpected situations.*

- f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.**

*Loose clothes, jewellery or long hair can be caught in moving parts.*

- g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.**

*Use of these devices can reduce dust related hazards.*

#### 4) Power tool use and care

- a) **Do not force the power tool. Use the correct power tool for your application.**

*The correct power tool will do the job better and safer at the rate for which it was designed.*

- b) **Do not use the power tool if the switch does not turn it on and off.**

*Any power tool that cannot be controlled with the switch is dangerous and must be repaired.*

- c) **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.**

*Such preventive safety measures reduce the risk of starting the power tool accidentally.*

- d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.**

*Power tools are dangerous in the hands of untrained users.*

- e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation.**

**If damaged, have the power tool repaired before use.**

*Many accidents are caused by poorly maintained power tools.*

- f) **Keep cutting tools sharp and clean.**

*Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*

- g) **Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed.**

*Use of the power tool for operations different from intended could result in a hazardous situation.*

#### 5) Service

- a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.**

*This will ensure that the safety of the power tool is maintained.*

### PRECAUTION

**Keep children and infirm persons away.**

**When not in use, tools should be stored out of reach of children and infirm persons.**

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## SAFETY INSTRUCTIONS FOR ALL SAWS

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### DANGER:

- a) **Keep hands away from cutting area and the blade. Keep your second hand on auxiliary handle, or motor housing.**

*If both hands are holding the saw, they cannot be cut by the blade.*

- b) **Do not reach underneath the workpiece.**  
*The guard cannot protect you from the blade below the workpiece.*

- c) **Adjust the cutting depth to the thickness of the workpiece.**

*Less than a full tooth of the blade teeth should be visible below the workpiece.*

- d) **Never hold piece being cut in your hands or across your leg. Secure the workpiece to a stable platform.**

*It is important to support the work properly to minimize body exposure, blade binding, or loss of control.*

- e) **Hold power tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.**

*Contact with a "live" wire will also make exposed metal parts of the power tool "live" and shock the operator.*

- f) **When ripping always use a rip fence or straight edge guide.**

*This improves the accuracy of cut and reduces the chance of blade binding.*

- g) **Always use blades with correct size and shape (diamond versus round) of arbour holes.**

*Blades that do not match the mounting hardware of the saw will run eccentrically, causing loss of control.*

- h) **Never use damaged or incorrect blade washers or bolt.**

*The blade washers and bolt were specially designed for your saw, for optimum performance and safety of operation.*

- **Never use any abrasive wheels**

*Burst of abrasive wheel cause serious injury of operator or persons around the working area.*

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## FURTHER SAFETY INSTRUCTIONS FOR ALL SAWS

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Causes and operator prevention of kickback:

- kickback is a sudden reaction to a pinched, bound or misaligned saw blade, causing an uncontrolled saw to lift up and out of the workpiece toward the operator;
- when the blade is pinched or bound tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back toward the operator;
- if the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the wood causing the blade to climb out of the kerf and jump back toward the operator.

Kickback is the result of saw misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

- a) **Maintain a firm grip with both hands on the saw and position your arms to resist kickback forces.**

**Position your body either side of the blade, but not in line with the blade.**

*Kickback could cause the saw to jump backwards, but kickback forces can be controlled by the operator, if proper precautions are taken.*

- b) **When blade is binding, or when interrupting a cut for any reason, release the trigger and hold the saw motionless in the material until the blade comes to a complete stop.**

**Never attempt to remove the saw from the work or pull the saw backward while the blade is in motion or kickback may occur.**

*Investigate and take corrective actions to eliminate the cause of blade binding.*

- c) **When restarting a saw in the workpiece, centre the saw blade in the kerf and check that saw teeth are not engaged into the material.**

*If saw blade is binding, it may walk up or kickback from the workpiece as the saw is restarted.*

- d) **Support large panels to minimize the risk of blade pinching and kickback.**

*Large panels tend to sag under their own weight. Supports must be placed under the panel on both sides, near the line of cut and near the edge of the panel.*

- e) **Do not use dull or damaged blades.**

*Unsharpened or improperly set blades produce narrow kerf causing excessive friction, blade binding and kickback.*

- f) **Blade depth and bevel adjusting locking levers must be tight and secure before making cut.**

*If blade adjustment shifts while cutting, it may cause binding and kickback.*

- g) **Use extra caution when making a "plunge cut" into existing walls or other blind areas.**

*The protruding blade may cut objects that can cause kickback.*

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## SAFETY INSTRUCTIONS FOR SAWS WITH INNER PENDULUM GUARD

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- a) **Check lower guard for proper closing before each use. Do not operate the saw if lower guard does not move freely and close instantly. Never clamp or tie the lower guard into the open position.**

*If saw is accidentally dropped, lower guard may be bent.*

*Raise the lower guard with the retracting handle and make sure it moves freely and does not touch the blade or any other part, in all angles and depth of cut.*

- b) **Check the operation of the lower guard spring. If the guard and the spring are not operating properly, they must be serviced before use.**

*Lower guard may operate sluggishly due to damaged parts, gummy deposits, or build-up of debris.*

- c) **Lower guard should be retracted manually only for special cuts such as "plunge cuts" and "compound cuts". Raise lower guard by retracting handle and as soon as blade enters the material, the lower guard must be released.**

*For all other sawing, the lower guard should operate automatically.*

- d) **Always observe that the lower guard is covering the blade before placing saw down on bench or floor.**

*An unprotected, coasting blade will cause the saw to walk backwards, cutting whatever is in its path. Be aware of the time it takes for the blade to stop after switch is released.*

## PRECAUTIONS ON USING CIRCULAR SAW

1. Do not use saw blades which are deformed or cracked.
2. Do not use saw blades made of high speed steel.
3. Do not use saw blades which do not comply with the characteristics specified in these instructions.
4. Do not stop the saw blades by lateral pressure on the disc.
5. Always keep the saw blades sharp.
6. Ensure that the lower guard moves smoothly and freely.
7. Never use the circular saw with its lower guard fixed in the open position.
8. Ensure that the retraction mechanism of the guard system operates correctly.
9. Never operate the circular saw with the saw blade turned upward or to the side.
10. Ensure that the material is free of foreign matters such as nails.
11. For models C9SA2 and C9BA2, the saw blades should be 235 mm.
12. For model C9BA2, be careful of brake kickback. C9BA2 model features an electric brake that functions when the switch is released. As there is some kickback when the brake functions, be sure to hold the main body securely.
13. Sparks can sometimes appear caused by braking operation when the switch is turned off since C9BA2 model employ electric brakes. Be informed, however, that this phenomenon is not a machine trouble.
14. For model C9BA2, when the brake becomes ineffective, replace the carbon brushes with new ones.
15. Disconnect the plug from the receptacle before carrying out any adjustment, servicing or maintenance.

## SPECIFICATIONS

Model		C9SA2	C9BA2
Voltage (by areas)*		(110V, 220V, 230V, 240V) ~	
Cutting Depth	90°	86 mm	
	45°	65 mm	
Power Input*		1570 W / 2000 W	
No-Load Speed		5000 / min	
Weight (without cord)		6.8 kg	

\*Be sure to check the nameplate on product as it is subject to change by areas.

## STANDARD ACCESSORIES

- (1) Saw Blade (Dia. 235 mm) ..... 1
  - (2) Hex. bar wrench ..... 1
  - (3) Guide ..... 1
  - (4) Wing-bolt ..... 1
- Standard accessories are subject to change without notice.

## OPTIONAL ACCESSORIES (sold separately)

- (1) Washer (A) ...for 16 mm (Hole dia. of saw blade)  
...for 30 mm (Hole dia. of saw blade)
- (2) Guide Rail Adapter (See Fig. 12)

Optional accessories are subject to change without notice.

## APPLICATION

Cutting various types of wood.

## PRIOR TO OPERATION

### 1. Power source

Ensure that the power source to be utilized conforms to the power requirements specified on the product nameplate.

### 2. Power switch

Ensure that the power switch is in the OFF position. If the plug is connected to a receptacle while the power switch is in the ON position, the power tool will start operating immediately, which could cause a serious accident.

### 3. Extension cord

When the work area is removed from the power source, use an extension cord of sufficient thickness and rated capacity. The extension cord should be kept as short as practicable.

### 4. Prepare a wooden workbench (Fig. 1)

Since the saw blade will extend beyond the lower surface of the lumber, place the lumber on a workbench when cutting. If a square block is utilized as a workbench, select level ground to ensure it is properly stabilized. An unstable workbench will result in hazardous operation.

### 5. When using the side handle (Fig. 2)

Securely attach the side handle to the base with the two flat head screws (M6 × 16) when using the side handle.

## CAUTION

To avoid possible accident, always ensure that the portion of lumber remaining after cutting is securely anchored or held in position.

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## ADJUSTING THE SAW PRIOR TO USE

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### 1. Adjusting the cutting depth

As shown in **Fig. 3**, hold the handle with one hand while loosening the knob with the other.

The cutting depth can be adjusted by moving the base to the desired position. In such manner adjust the cutting depth and then securely retighten the knob.

### 2. Adjusting the angle of inclination

As shown in **Fig. 4 (A)**, **Fig. 4 (B)** by loosening the wing-nut on the incline gauge and the wing-bolt on the base, the saw blade may be inclined to a maximum angle of 45° in relation to the base. After having completed the adjustment, reconfirm that the wing-nut and the wing-bolt are firmly tightened.

### 3. Regulating the guide (Fig. 5)

The cutting position can be regulated by moving the guide to the left or right after loosening its wingbolt. The guide may be mounted on either the right or left side of the tool.

### 4. Adjusting the guide piece

On the circular saw, it is possible to make fine adjustment of the fixing position of the guide piece, where the saw blade and the premarked line are to be aligned.

When the saw is shipped from the factory, the linear portion of a front scale on the guide piece is aligned with the central position of the saw blade (**Fig. 6**).

Loosen the fixed M4 screw on the guide piece, should the fixing position be wrong, and make necessary adjustment of the position.

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## CUTTING PROCEDURES

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1. Place the base on the material, then align the premarked line and the sawblade with the guide piece front scale section at the front of the base (**Fig. 6**).

When the base is not slanted, use the large cutout as the guide (**Fig. 6**, **Fig. 7 (A)**).

If the base is slanted (45 degrees), use the small front scale as the guide (**Fig. 6**, **Fig. 7 (B)**).

2. Ensure that the switch is turned to the ON position before the saw blade comes in contact with the lumber. The switch is turned ON when the trigger is squeezed; and OFF when the trigger is released.
3. Moving the saw straight at a constant speed will produce optimum cutting.

### CAUTIONS

Prior to cutting operation, make sure the material you are going to cut. If the material to be cut is expected to generate harmful / toxic dusts, make sure the dust bag or appropriate dust extraction system is connected with dust outlet tightly.

Wear the dust mask additionally, if available.

A coating of PFTE is applied to the bases of the C9BA2 type. Be careful not to press too hard on the unit body since this tends to place a heavy load on the motor. Using a gentle pressure will make the piece slide easier and allow cutting with less force. Trying to cut wood that is covered with hard particle material such as sand or metal chips tends to easily scratch damage the surface coating so use caution.

- Before starting to saw, ensure that the saw blade has reached full speed revolution.
- Should the saw blade be stopped or made an abnormal noise during operation, turn off the switch immediately.
- Always take care in preventing the power cord from coming near the revolving saw blade.
- Using the circular saw with the saw blade facing upwards or sideways is very hazardous. Such uncommon applications should be avoided.
- When cutting materials, always wear protective glasses.
- When finished with a job, pull out the plug from the receptacle.

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## MOUNTING AND DISMOUNTING THE SAW BLADE

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### CAUTION

To avoid serious accident, ensure the switch is in the OFF position, and the power source is disconnected.

#### 1. Dismounting the saw blade

- (1) Set the cutting volume at maximum, and place the Circular Saw as shown in **Fig. 8**.
- (2) Depress the lock lever, lock the spindle, and remove the hexagonal-socket bolt with the Hex. bar wrench.
- (3) While holding the lower guard lever to keep the lower guard fully retracted into the saw cover, remove the saw blade.

#### 2. Mounting the Saw Blade

- (1) Thoroughly remove any sawdust which has accumulated on the spindle, bolt and washers.
- (2) As shown in **Fig. 9**, the side of Washer (A) with a projected center the same diameter as the inner diameter of the saw blade and the concave side of Washer (B) must be fitted to the saw blade sides.

\* Washer (A) is supplied for 2 types of saw blades with the hole diameters of 16 mm and 30 mm. (When buying the Circular Saw, one type of washer (A) is supplied.)

In case the hole diameter of your saw blade does not correspond to that of washer (A), please contact the shop where you purchased the Circular Saw.

- (3) To assure proper rotation direction of the saw blade, the arrow direction on the saw blade must coincide with the arrow direction on the saw cover.
- (4) Using the fingers, tighten the hexagonal-socket bolt retaining the saw blade as much as possible. Then depress the lock lever, lock the spindle, and thoroughly tighten the bolt.

### CAUTION

After having attached the saw blade, reconfirm that the lock lever is firmly secured in the prescribed position.

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## MAINTENANCE AND INSPECTION

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### 1. Inspecting the saw blade

Since use of a dull saw blade will degrade efficiency and cause possible motor malfunction, sharpen or replace the saw blade as soon as abrasion is noted.

### 2. Inspecting the mounting screws

Regularly inspect all mounting screws and ensure that they are properly tightened. Should any of the screws be loose, retighten them immediately. Failure to do so could result in serious hazard.



### 3. Inspecting the carbon brushes (Fig. 10)

The motor employs carbon brushes which are consumable parts. Since an excessively worn carbon brush can result in motor trouble, replace the carbon brushes with new ones having the same carbon brush No. shown in the figure when it becomes worn to or near the "wear limit". In addition, always keep carbon brushes clean and ensure that they slide freely within the brush holders.

#### CAUTION

- When replacing the new carbon brushes, always use genuine Hitachi carbon brushes with the number specified in the drawing.
- For model C9BA2, the brake may not work if other than the specified carbon brushes are used. When the brake becomes ineffective, replace the carbon brushes with new ones.

### 4. Replacing carbon brushes

Disassemble the brush caps with a slotted-head screwdriver. The carbon brushes can then be easily removed.

### 5. Replacing supply cord

If the replacement of the **supply cord** is necessary, this has to be done by Hitachi Authorized Service Center in order to avoid safety hazard.

### 6. Maintenance of the motor

The motor unit winding is the very "heart" of the power tool.

Exercise due care to ensure the winding does not become damaged and/or wet with oil or water.

### 7. Adjusting the base and saw blade to maintain perpendicularity

The angle between the base and the saw blade has been adjusted to 90°, however should this perpendicularity be lost for some reason, adjust in the following manner:

- (1) Turn the base face up (Fig. 11) and loosen the wing-nut and wing-bolt (Fig. 4 (A), Fig. 4 (B)).
- (2) Apply a square to the base and the saw blade and turning the slotted set screw with a slotted-head screwdriver, shift the position of the base to produce the desired right angle.

### 8. Service parts list

#### CAUTION

Repair, modification and inspection of Hitachi Power Tools must be carried out by an Hitachi Authorized Service Center.

This Parts List will be helpful if presented with the tool to the Hitachi Authorized Service Center when requesting repair or other maintenance.

In the operation and maintenance of power tools, the safety regulations and standards prescribed in each country must be observed.

#### MODIFICATIONS

Hitachi Power Tools are constantly being improved and modified to incorporate the latest technological advancements.

Accordingly, some parts may be changed without prior notice.

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#### NOTE

Due to HITACHI's continuing program of research and development, the specifications herein are subject to change without prior notice.

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# 一般安全規則

## 警告！

### 請通讀本說明書

若不遵守下列注意事項，可能會導致電擊、火災及/或嚴重傷害。

下述警告中的術語「電動工具」，指插電（有線）電動工具或電池（無線）電動工具。

### 請妥善保管本說明書

#### 1) 工作場所

- a) 工作場所應打掃乾淨，並保持充分的亮度。  
雜亂無章及光線昏暗容易導致事故。
- b) 請勿在易爆炸的環境中操作電動工具，如存在易燃液體、氣體或粉塵的環境中。  
電動工具產生的火花可能會點燃煙塵。
- c) 操作電動工具時，孩童與旁觀者勿靠近工作場所。  
工作時分神可能會造成工具失控。

#### 2) 電氣安全

- a) 電動工具插頭必須與插座相配。  
不得以任何形式改裝插頭。  
不得對接地的電動工具使用任何轉接插頭。  
原裝插頭及相配插座將會減少電擊的危險。
- b) 應避免身體與大地或接地表面，如管道、散熱器、爐灶、冰箱等的接觸。  
若身體接觸大地或接地表面，更會增加電擊的危險。
- c) 電動工具不可任其風吹雨打，或置於潮濕的環境中。  
水進入電動工具也會增加電擊的危險。
- d) 要小心使用電線。不要用電線提拉電動工具，或拉扯電線來拆除工具的插頭。  
電線應遠離熱源、油液，並避免接觸到銳利邊緣或轉動部分。  
電線損壞或攪纏在一起會增加電擊的危險。
- e) 在室外操作電動工具時，請使用專用延伸線。  
使用專用延伸線可降低電擊的危險。

#### 3) 人身安全

- a) 保持高度警覺，充分掌握情況，以正常的判斷力從事作業。  
疲勞狀態或服藥、飲酒後，請勿使用電動工具。  
操作電動工具時，一時的疏忽都可能造成嚴重的人身傷害。

- b) 使用安全設備。始終配戴安全眼鏡。

在適用條件下，使用防塵面罩、防滑膠鞋、安全帽或聽覺保護裝置等安全設備，都會減少人身傷害。

- c) 謹防誤開動。插接電源前，請先確認開關是否已切斷。

搬移電動工具時指頭接觸開關，或接通開關狀態下插上電源插座，都容易導致事故。

- d) 開動前務必把調整用鍵和扳手類拆除下來。

扳手或鍵留在轉動部分上，可能會造成人身傷害。

- e) 要在力所能及的範圍內進行作業。作業時腳步要站穩，身體姿勢要保持平衡。

這樣在意外情況下可以更好地控制工具。

- f) 工作時衣服穿戴要合適。不要穿著過於寬鬆的衣服或佩帶首飾。頭髮、衣角和手套等應遠離轉動部分。

鬆散的衣角、首飾或長髮都可能會捲入轉動部分。

- g) 如果提供連接除塵和集塵的設備，請確認是否已經連接好並且使用正常。

使用這些設備可降低粉塵引起的危險。

#### 4) 電動工具的使用和維護

- a) 不要使勁用力推壓。應正確使用電動工具。  
正確使用才能讓工具按設計條件有效而安全地工作。
- b) 如果電動工具不能正常開關，切勿使用。  
無法控制開關的電動工具非常危險，必須進行修理。
- c) 進行調整、更換附件或存放工具前，請拆除電源插頭。  
此類預防安全措施可減少誤開動工具的危險。
- d) 閒置不用的工具，應存放在孩童夠不到的地方；不熟悉電動工具或本說明書的人員，不允許操作本工具。  
未經培訓的人員使用電動工具非常危險。
- e) 妥善維護工具。檢查轉動部分的對準、連接，各零件有無異常，及其他足以給工作帶來不良影響的情況。  
如有損壞，必須修理後才能使用。  
許多事故都是因工具維護不良引起的。
- f) 保持工具鋒利、清潔。  
正確維護工具，使其保持鋒利，作業順暢，便於控制。

- g) 請根據本說明書，按照特殊類型電動工具的方式，使用本工具、附件及鑽頭，並考慮作業條件及具體的作業情況。

電動工具用於規定外的作業，可能會導致危險狀況。

#### 5) 維修

- a) 本電動工具的維修必須由專業人員使用純正配件進行。

這樣才能確保電動工具的安全性。

#### 注意事項：

不可讓孩童和體弱人士靠近工作場所。

應將不使用的工具存放在孩童和體弱人士伸手不及的地方。

## 所有圓鋸機之安全說明

#### 危險：

- a) 手部必須遠離鋸片與切割區域。另一手須握持輔助把手或馬達外殼。  
如果雙手皆握住圓鋸機，雙手便可免於鋸片所傷。
- b) 不可碰觸下方的工件。  
否則保護罩無法保護您免於鋸片所傷。
- c) 調整工件厚度的相對鋸切深度。  
在工件下方應可看到小於鋸片全齒深之深度。
- d) 不可使用手按住或腿壓住正在鋸切的工件。必須將工件固定於平穩的工作台。  
減少身體的暴露、鋸片卡住或失控，是正確的完成工作的重要憑藉。
- e) 在鋸切工具可能接觸到隱藏線路或其本身的線路之情況下進行操作時，須握持鋸切工具的絕緣握持面。  
否則接觸到「有電」的線路與置身在電動工具的金屬部位時，將會造成操作員觸電的危險。
- f) 進行鋸切時應使用鋸切護罩或直線導向器。  
此舉可改善鋸切的精確度並減少發生鋸片卡住的機會。
- g) 使用正確的軸孔尺寸與形狀（菱形端或圓端）的鋸片。  
鋸片安裝不正確將有導致鋸切失控的危險。
- h) 不可使用已損壞或不正確的鋸片墊圈或螺栓。  
鋸片墊圈與螺栓是特別專為圓鋸機所設計以提供最佳的性能表現與最安全的操作。
- 不可使用任何砂輪  
砂輪所產生的爆裂會造成操作員或工作區附近的人員之嚴重傷害。

## 所有圓鋸機之詳細安全說明

反衝作用之發生原因與防止：

- 反衝作用是因鋸片受夾住、卡住或不對準而導致鋸片失控舉起或脫離工件而朝向操作員的作用力；
- 當鋸片緊固地夾住、卡住於切口時，此時馬達會有反向作用力朝向操作員；
- 鋸切時鋸片扭曲或不正，鋸片後緣的齒部便會戳入木材的上表面而造成鋸片脫離切口並回彈朝向操作員。

反衝作用是圓鋸機誤用與/或操作程序或條件不正確所造成的結果，以下所列的正確防範措施可以避免此類問題的發生。

- a) 兩手保持緊握圓鋸機並且將手臂置於適當的位置以抵抗反衝作用力。

身體須位於鋸片的任一側，身體與鋸片不可成一直線。

反衝作用力會導致圓鋸向後彈跳，但如果有採取適當的預防措施，反衝作用力是可以被操作者所控制。

- b) 當鋸片被夾住時或者由於某些原因中斷時，請鬆開扳機並且保持圓鋸機不動，直到鋸片作動完全停止。

當鋸片在運行中或者有可能發生反衝作用力時，決不可試圖從工件上移開圓鋸機或者將圓鋸機向後拉。

須進行研究並且採取矯正措施以消除鋸片夾住的原因。

- c) 重新啓動鋸切工件時，須將鋸片定位在切口中央並檢查鋸片是否未夾入材料中。

如果鋸片有夾入，則重新啓動鋸片時可能會造成工件的移動或產生反衝作用力。

- d) 採用大面板支撐座，使鋸片受夾住或產生反衝作用力的風險降到最低。

由於其自身重力，大面板支撐座趨於下陷。支撐座必須置於面板兩側的下方，靠近鋸切路徑與面板邊緣。

- e) 不要使用不鋒利或已損壞的鋸片。

裝設不鋒利或不正確的鋸片會產生狹窄切口而造成過大的磨擦力、鋸片夾住以致產生反衝作用力。

- f) 在進行鋸切之前，鋸片深度與斜度調整鎖定控制桿必須安全固定。

如果鋸片調整裝置在鋸切時移動，可能會造成夾住並產生反衝作用力。

- g) 在進行牆壁或其他隱蔽區域之鋸切時請格外小心。  
鋸片可能會鋸切到足以產生反衝作用力的物體。

一個未受保護、限制的鋸片將會導致圓鋸機反向行進而產生任意鋸切的情形。請務必明瞭在鬆開開關後至鋸片完全停止時所需的時間。

## 使用手提電動圓鋸時應注意事項

1. 不要使用變形或斷裂的鋸片。
2. 不要使用由高速鋼所做成的鋸片。
3. 不要使用未依照規定的鋸片。
4. 不要在圓盤上施加橫向壓力使鋸片停止。
5. 隨時保持鋸片鋒利。
6. 確定下罩可平順且自由的移動。
7. 決不可將圓鋸機的下罩固定在開啓位置。
8. 確定護罩系統的縮回機構能正確的作動。
9. 決不以向上或移動至側邊的操作方式進行操作圓鋸機。
10. 確保工件材料沒有鐵釘之類的異物。
11. 對於機種C9SA2 和C9BA2而言，鋸片直徑應該是235 mm。
12. 對於機種C9BA2而言，須注意其制動反衝作用力。當開關被鬆開時，C9BA2便具有電力制動功能。當啓用制動功能時，會產生些許反衝作用力，請務必安全緊握圓鋸機本體。
13. 因為C9BA2 機種是使用電力制動，所以當關閉開關時，有時會由於剎車而出現火花。不過，此現象並非機器有問題。
14. 對於機種C9BA2而言，當剎車變得無效時，請更換新的碳刷。
15. 在進行任何調整、保養或維修之前，須先拔下插座上的插頭。

## 具有內部鐘擺護罩的圓鋸機安全說明

- a) 在每次使用之前，先檢查下罩是否能正確的關閉。如果下罩無法自由移動與立即關閉，決不可操作圓鋸機。不可將下罩夾入或栓入開啓位置。

如果圓鋸機不慎掉落，其下罩可能會折彎。使用縮回操作以升起下罩，並確定它可自由移動而且在各種角度和深度之鋸切皆不會接觸到鋸片或者任何其他部位。

- b) 檢查下罩彈簧之作動狀況。如果下罩與彈簧皆無法正確的作動，請在使用之前必須先行將它們修復。

下罩可能由於零件損壞、黏膠沉澱，殘屑生成而造成作動遲滯。

- c) 僅在使用「切入式鋸切(plunge cuts)」與「複合式鋸切(compound cuts)」之類的特殊鋸切方式時才須使用手動縮回下罩。利用縮回把手可將下罩舉起，當鋸片開始鋸切工件材料時，必須釋放下罩。

所有圓鋸機的下罩皆應可自動的作動。

- d) 在將圓鋸機置於工作台或地板上之前，先檢查下罩是否有覆蓋於鋸片上。

## 規 格

型 式		C9SA2	C9BA2
電壓(按地區)*		(110V, 220V, 230V, 240V) ~	
切削深度	90度	86mm	
	45度	65mm	
輸入功率*		1570W/2000W	
額定輸出功率		950W	
無負荷速度*		5,000 轉/分	
重量(不含線纜)		6.8kg	

\*當須改變地區時應檢查產品上的銘牌。

# 標準附件

- (1) 鋸片（直徑 235 mm） ..... 1
- (2) 六角頭棒形扳手 ..... 1
- (3) 引導器 ..... 1
- (4) 蝶形螺栓 ..... 1

標準附件可能不預先通告而徑予更改。

# 選購附件（分開銷售）

- (1) 襯墊 (A) ...適用於16 mm（鋸片孔徑）  
...適用於30 mm（鋸片孔徑）
- (2) 導軌轉接器 (見圖12)

選購附件可能不預先通告而徑予更改。

# 用途

- 鋸割各種木材。

# 作業之前

## 1. 電源

確認所使用的電源與工具銘牌上標示的規格是否相符。

## 2. 電源開關

確認電源開關是否切斷。若電源開關接通，則插頭插入電源插座時電動工具將出其不意地立刻轉動，從而招致嚴重事故。

## 3. 延伸線纜

若作業場所移到離開電源的地點，應使用容量足夠、鍍裝合適的延伸線纜，並且要盡可能地短些。

## 4. 制備木質工作臺（圖1）

鋸片將露出鋸木下面，所以鋸割時，應將鋸木放在工作臺上。若用方木塊作為工作臺，則應選擇平坦地面，以保持穩定。使用不穩定的工作臺，工作時非常危險。

## 5. 使用側邊把手（圖2）

欲使用側邊把手時，需用2個平頭螺絲（M6 × 16）將側邊把手固定至底座上。

## 注意

為避免可能發生的意外事故，請隨時確保在鋸切後，將剩餘的部分工件拴固妥當。

# 使用前調整電動圓鋸

## 1. 調整鋸切深度

如圖3所示，鬆開旋鈕時，請用一手握持把手。藉由移動底座至所要的位置，即可調整鋸切深度。完成調整鋸切深度後，再將旋鈕鎖緊。

## 2. 調整傾斜角度

如圖4（A）、圖4（B）所示，藉由鬆開傾斜規上的蝶形螺帽與底座上的蝶形螺栓，鋸片可用相對於底座之方式傾斜45°角。完成調整之後，再將蝶形螺帽與蝶形螺栓穩固地鎖緊。

## 3. 調整引導器（見圖5）

擰鬆蝶形螺栓，將引導器左右移動，即可調整鋸割位置。  
可將引導器安裝在工具的左側或右側。

## 4. 調整導向器

在圓鋸機上，可進行導向器固定位置之微調，此微調之位置須先將鋸片與記號線對準。  
圓鋸機從工廠出貨後，導向器上的前段線性比例尺會與鋸片的中央部位對準（圖6）。  
萬一固定位置是錯誤的話，請鬆開導向器上的M4螺絲，做必要的調整。

# 鋸割步驟

- 將底座置於工件材料上方，然後在底座前方，將鋸片及導向器前段線性刻度尺對準於記號線（圖6）。  
底座無傾斜角度時，請使用大截面部位以做為導引之用（圖6，圖7（A））  
如果有傾斜角度（45度）時，請以小的前段刻度尺做為導引之用（圖6，圖7（B））
- 鋸片在開始進行鋸切材料之前，務必先將開關切換至ON的位置。扳動扳機時即可將開關切換至ON而鬆開扳機時便可將開關切換至OFF。
- 以直線等速移動的方式可獲致最佳的鋸切效果。

### 注意

進行鋸切操作之前，請確認材料是否適當。如果鋸切材料時會產生有害物質，請務必使用集塵袋或接上適當的粉塵抽取設備將粉塵排出。

必要時請戴上防塵罩。

在C9BA2機種之底座上有使用PFTF鍍層。請勿在本體上用力過度，因為此舉會造成馬達承受過大的壓力。使用適當的壓力有助於讓工件滑動更順利而且鋸切力也會較低。鋸切有覆蓋砂粒或金屬碎片之木材時，有可能會傷及鍍層表面，請格外小心。

- 開始進行鋸切之前，請確定鋸片有全速運轉。
- 如果在操作中發生鋸片停止作動或發出異常的噪音時，請立即關閉開關。
- 隨時注意不要讓電源線靠近轉動的鋸片。
- 鋸片朝上或朝側面使用手提電動圓鋸是非常危險的，這種不正常的用途應予避免。
- 鋸割材料時，務請戴上護眼鏡。
- 完成作業時，應將插頭從電源座拔出。

## 鋸片的裝卸

### 注意

為了避免發生嚴重事故，務必將開關於 OFF（斷開）位置，並把電源切斷。

### 1. 拆卸鋸片

- (1) 將鋸切容量設定為最大，並且將圓鋸機安置於如圖8 所示之位置。
- (2) 按下鎖緊桿，鎖住轉軸，並使用六角頭棒形扳手拆下六角承座螺栓。
- (3) 握著下罩旋鈕，將下罩縮回到鋸蓋內，然後拆下鋸片。

### 2. 安裝鋸片

- (1) 將轉軸、螺栓、墊圈上的鋸屑灰塵完全清除。
- (2) 如圖9所示，有中央突起的墊圈(A)側之直徑與鋸片的內徑相同。墊圈(B)的凹陷側必須配合至鋸片側。

\* 墊圈(A)可分為孔徑16 mm 與 30 mm兩種類型。(購買圓鋸機時，有附孔徑16 mm 或30 mm類型的墊圈(A)。)

如果你所購買的鋸片孔徑與墊圈(A)不相符，請洽詢經銷商解決此一問題。

- (3) 欲確保鋸片能依照正確方向轉動時，鋸片的箭頭方向必須與鋸蓋的箭頭方向一致。
- (4) 使用手指，儘可能上緊六角形承座螺栓。接著壓下鎖緊桿，鎖住轉軸，然後完全鎖緊螺栓。

### 注意

裝上鋸片之後，再確認鎖緊桿有被緊固的鎖在適當的位置上。

## 維護和檢查

### 1. 檢查鋸片

使用鈍的鋸片會降低鋸切效率並造成馬達故障，故須將鋸片磨利或換新。

### 2. 檢查安裝螺釘

要經常檢查安裝螺釘是否緊固妥善。若發現螺釘鬆了，應立即重新扭緊，否則會導致嚴重的事故。

### 3. 檢查碳刷(圖 10)

馬達使用碳刷，它是消耗部品，因為使用過久的碳刷將會導致馬達故障，用具有相同碳刷號的新碳刷去更換舊的，碳刷編號用數字表示碳刷何時用舊或接近於磨損極限此之外，要經常保持碳刷清潔以及保證它在刺握裡能自由滑動。

### 注意

- 在更換新的碳刷前，請按照分解圖上指定的數字使用日立指定的碳刷。
- 對於幾種C9BA2，如果使用了非指定的碳刷。剎車不會運轉。  
當剎車失靈時，請更換新的碳刷。

### 4. 更換碳刷

用無頭螺絲刀卸下碳刷蓋，然後可以很容易地取下碳刷。

### 5. 更換電源線

必要時則更換之，基於安全上的考量，此項工作請洽詢Hitachi 服務中心處理。

### 6. 電動機的維護

電動機繞線是電動工具的心臟部。應仔細檢查有無損傷，是否被油液或水沾濕。

## 7. 將鋸片與底座調整至相互垂直

雖然鋸片與底座之夾角已調整至 $90^{\circ}$ ，然而在有些狀況時其夾角可能無法互為垂直，需使用下列方法調整之：

- (1) 將底座表面朝上(圖11)，然後鬆開蝶形螺帽與蝶形螺栓(圖4 (A)，圖4 (B))。
- (2) 使用槽頭螺絲起子轉動槽頭螺絲，利用直角尺將底座與鋸片調整至互為垂直。

## 8. 維修部件目錄

### 注意：

日立電動工具的修理、維護和檢查必須由日立所認可的維修中心進行。

當尋求修理或其他維護時，將本部件目錄與工具一起提交給日立所認可的維修中心會對您有所幫助。在操作和維護電動工具中，必須遵守各國的安全規則和標準規定。

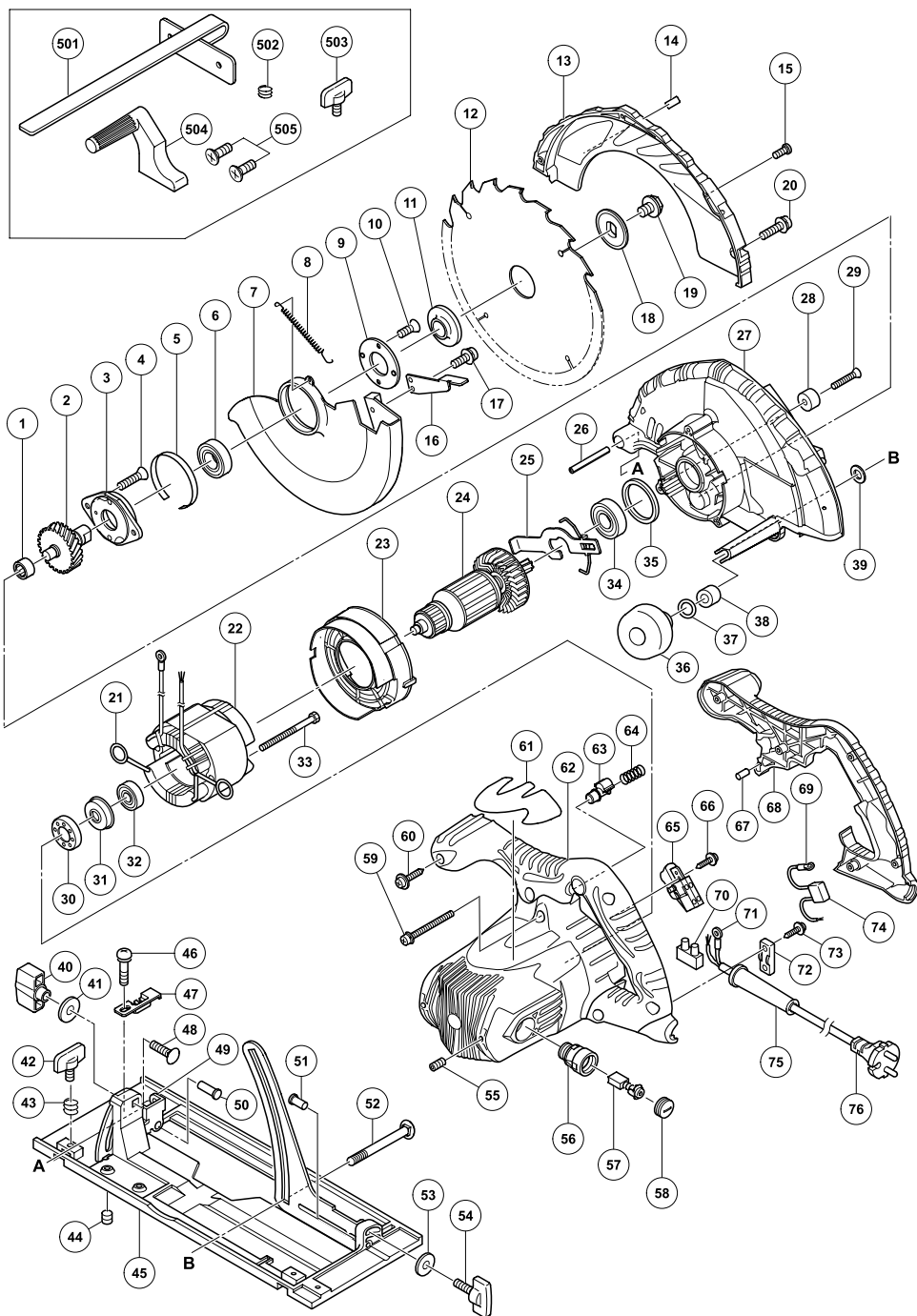
### 改進：

日立電動工具隨時都在進行改進以適應最新的技術進步。

因此，有些部件可能未預先通知而進行改進。

### 注

為求改進，本手冊所載規格可能不預先通告徑予更改。





Item No.	Part Name	Q'TY
1	NEEDLE BEARING (HK1212)	1
2	SPINDLE AND GEAR SET	1
3	BEARING HOLDER	1
4	SEAL LOCK FLAT HD. SCREW M6×14	2
5	LINER	1
6	BALL BEARING 6203VVCMP2L	1
7	SAFETY COVER	1
8	RETURN SPRING	1
9	BEARING COVER	1
10	SEAL LOCK FLAT HD. SCREW M5×14	2
11	WASHER (A)	1
12	TCT SAW BLADE 235MM	1
13	SAW COVER	1
14	HITACHI LABEL	1
15	SPECIAL BOLT	1
16	KNOB	1
17	MACHINE SCREW (W/WASHERS) M4×10	1
18	WASHER (B)	1
19	HEX. SOCKET HD. BOLT M8×15.5	1
20	MACHINE SCREW (W/WASHERS) M4×14	4
21	BRUSH TERMINAL	2
22	STATOR ASS'Y	1
23	FAN GUIDE	1
24	ARMATURE	1
25	LOCK LEVER	1
26	ROLL PIN D8×50	1
27	GEAR COVER	1
28	CUSHION	1
29	FLAT HD. SCREW M6×20	1
30	RUBBER BUSHING	1
31	BEARING BUSHING	1
32	BALL BEARING 6000VVCMP2L	1
33	HEX. HD. TAPPING SCREW D5×65	2
34	BALL BEARING 6202VVCMP2L	1
35	RUBBER RING	1
36	KNOB	1
37	O-RING (P-7)	1
38	SLEEVE	1
39	WASHER (B)	1
40	WING NUT M8	1
41	BOLT WASHER M8	1
42	WING BOLT M6×15	1
43	LOCK SPRING	1
44	SLOTTED HD. SET SCREW (SEAL LOCK) M6×6	1
45	BASE ASS'Y	1
46	MACHINE SCREW (W/SP. WASHER) M4×6	1
47	GUIDE PIECE	1
48	BOLT (SQUARE) M8×30	1
49	BEVEL PLATE	1
50	RIVET D6×24	1
51	RIVET D6×17	1
52	DIAGONAL BOLT M8	1
53	WASHER M6	1
54	WING BOLT (A) M6×20	1

Item No.	Part Name	Q'TY
55	HEX. SOCKET SET SCREW M5×8	2
56	BRUSH HOLDER	2
57	CARBON BRUSH	2
58	BRUSH CAP	2
59	MACHINE SCREW (W/WASHERS) M5×40	3
60	TAPPING SCREW (W/FLANGE) D4×20	5
61	NAME PLATE	1
62	HOUSING ASS'Y	1
63	SAFETY LOCK BUTTON	1
64	SPRING	1
65	SWITCH (1P SCREW TYPE)	1
66	TAPPING SCREW (W/FLANGE) D4×12	1
67	BEARING LOCK	1
68	HANDLE COVER	1
69	TERMINAL	1
70	PILLAR TERMINAL	1
71	TERMINAL	1
72	CORD CLIP	1
73	TAPPING SCREW D4×16	2
74	NOISE SUPPRESSOR	1
75	CORD ARMOR	1
76	CORD	1
501	GUIDE	1
502	LOCK SPRING	1
503	WING BOLT M6×15	1
504	SIDE HANDLE	1
505	FLAT HD. SCREW M6×16	2

